CHAPTER 17.0 TABLE OF CONTENTS

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17.0 INTERPRETATIONS

17.1 Scope

This section describes the process for manual users to request interpretations, and the committee's method for issuing interpretations. At the end of this section is a listing of all issued interpretations.

NOTE: The committee does not grant variances, exemptions or waivers to requirements. Please see Chapter 1.0 Introduction, Section 1.7.1 Variances, Exemptions and Waivers.

17.2 General

17.2.1 Submitting Request for Interpretation

The Hanford Hoisting & Rigging Committee will provide an interpretation of the requirements in the DOE/RL-92-36 Hanford Site Hoisting and Rigging Manual. Interpretations requests shall be submitted for presentation to committee by any of the following methods:

1. Written request sent to the Chairman, Hanford Hoisting & Rigging Committee at ^Hanford Hoisting & Rigging.
2. Written request sent to any Committee Member
3. Written request to the DOE RL Hoisting & Rigging Program Manager
4. Written request presented in person at a scheduled Hanford Hoisting & Rigging Committee Meeting when the Committee Chairman is notified by the requestor seven calendar days prior to a scheduled meeting.

17.2.2 Formatting Request for Interpretation

The written request for interpretation shall be clear and unambiguous. It is further required that the requester submit his request utilizing the following format.

1. **Subject:** Cite the applicable chapter and paragraph number and provide a concise description.

2. **Question:** Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for approval of a proprietary design or situation. The inquirer may also include any plans or drawings that are necessary to explain the question; however, they should not contain any proprietary names or information.

Requests that are not in this arrangement will be rewritten in this format by the Committee prior to being answered, which could change the intent of the original request.

17.2.3 Committee Response to Request for Interpretation

Response to interpretations will be provided via email to the requester when approved by the committee. Publication of interpretations will occur at the time of with next published release of the manual. Interpretations will be removed from this section if the manual is revised to address the interpretation. When the committee considers it necessary it may request guidance or an interpretation of the applicable 29 CFR's, National Consensus Standards, or DOE Orders/Standards.

17.3 Published Interpretations

Interpretations are listed in order of related chapter and date issued.

17.3.1 Chapter 1.0 Introduction

Interpretations: None

17.3.2 Chapter 2.0 Responsibilities

Interpretations:

2.2.2 Supervisor or Manager, Hoisting and Rigging Operations

A supervisor or manager shall be responsible for each H&R operation and shall ensure that:

f. A designated leader shall be assigned to hoisting and rigging operations that require more than one person. See paragraphs 2.2.4 and 2.2.5.

2.2.5 Designated Leader

A designated leader shall be appointed to hoisting and rigging activities that involve more than one person. Normal forklift truck material handling operations are not considered hoisting and rigging activities and do not require a DL. The DL may be the operator, a crew member, or any qualified person. (See Chapter 4, "Personnel Qualification and Training Requirements") The DL shall:

May 7, 2008 Question 1: Does the requirement to assign a designated leader apply when more than one person is involved in performing inspections of mobile cranes that involve crane movements such as boom, swing or hoist but does not involve the lifting of loads ?

Answer 1: It is DOE-RL's response that a designated leader shall be assigned when more than one person is involved in performing inspections of a mobile crane involving movements such as the boom, swing or hoist and there is no lifting of loads. If you have any questions please contact Fred Beard, Hanford Hoisting and Rigging Program Manager at 376-6630.

17.3.3 Chapter 3.0 Critical Lifts

Interpretations:

The Hanford site hoisting and rigging manual states in chapter **3.5 CRITICAL LIFT PLAN: "A** step-by-step plan or work instructions shall be prepared or approved by a technically qualified person. (See Attachment 3-9, "Plan Worksheet.") Critical lift plans shall contain the following:"

"7. Rigging Sketch(s), which include the following:

c. Load angle factors (e.g., vertical and horizontal vectors of sling loads)
d. Sling angles"

July 17, 2008 Question 1: Is it required to show in the lift plan load angle factors and sling angles for manufacture supplied and designed rigging hardware that is part of a below the hook lifting device (spreader beam slings) where those calculations have already been completed as part of the designed requirements.

Answer 1: No, although it must to be noted on the lift sketches and or drawings that the lifting device slings were furnished by the lifting device manufacturer. Providing the manufacturer's part number or other reference information is advisable.

July 17, 2008 Question 2: If the answer to question 1 is no, would it be required to show in the lift plan load angle factors (e.g., vertical and horizontal vectors of sling loads) and sling angles for all other slings that are not part of a manufactured supplied device?

Answer 2: Yes. The plan must show each sling (s) actual tension and loading or the sling (s) capacity as they are being used, identifying sling length, angle (s), hitch configuration and size.

July 17, 2008 Question 3: Is it the intent to show in the lift plan load angle factors (e.g., vertical and horizontal vectors of sling loads) when angles and increased loading are minimal?

Answer 3: Yes. The purpose is to indicate to the DL and other users and reviewers of the lift plan that load angle factors (e.g., vertical and horizontal vectors of sling loads) have been calculated and addressed.

17.3.4 Chapter 4.0 Personnel Qualifications and Training Requirements

Interpretations:

Section 4.3.5 Qualification Personnel shall be considered qualified when they accomplish the following:

1. Satisfactorily complete training or meet the requirements of previous training (see Section 4.3.1)
2. Pass a written/oral examination of the knowledge requirements for the applicable activity.
3. Satisfactorily complete equipment specific OJT for OJT instructors, on-the-job evaluators, and equipment operators. Management may determine that previous qualification or experience fulfills this requirement.
4. Pass an equipment specific OJE for OJT instructors, evaluators, and equipment operators.

July 28, 2000 - Question 1: – Does section 4.3.5 mean that on the job evaluators (OJE) must be experienced/qualified operators of the equipment (or subject area) covered in the evaluation?

Answer 1: The OJT and OJE sections of Chapter 4 have been re-written as shown below to clarify the qualification and requalification required for On-the-Job Evaluators.

Chapter 4, Appendix A, Section O, On-the-Job Evaluator now states: On-the-job evaluators shall have the technical information on the subject area of evaluations, be qualified to perform on-the-job-evaluations of proper operator actions, and should be trained in the following:

1. Evaluation techniques
2. Test administration
3. Performance evaluation
4. Use of OJE forms
5. Records management

Section 4.3.6.2 Requalification Methods now states: Personnel performing the following activities may be re-qualified by the methods indicated. Personnel, who do not satisfactorily complete requalification by an identified method, shall complete training as listed in Sections 4.3.1.3:

Section 4.3.6.2.8 now states: On-the-job training or evaluation of personnel. – Note: - On-the-job Trainers and Evaluators must maintain and demonstrate both their instructional proficiency and technical proficiency. See the Hoisting and Rigging Training Program Description Section 4.4.4.5, and Attachment 2 for examples of a flow path of this process.

17.3.5 Chapter 5.0 Hooks

Interpretations:

April 2009 - Question 1: For a remote hot cell Electric Overhead Traveling Crane is it necessary for the crane hook to have a latch?

Answer 1: . No. As the requirements clearly indicates and is applied at Hanford on remotely operated cranes currently and over many decades, if the use of the hook latch is impractical then it can be removed or not used.

17.3.6 Chapter 6.0 Forklift Trucks

Interpretations:

HYSTER OPERATING MANUAL, page 38: "WARNING: Do not turn on an incline. To reduce the possibility of a tip over, a lift truck must not be driven across an incline."

September 13, 2005 - Question 1: What is the specific allowable percentage of grade for side-slope operation across an incline for safe operation of a forklift? For example, a road has a crown for water drainage, which presents a cross slope operation to a forklift. References- DOE/RL-92-36, Chapter 6: "Common Errors during Forklift Operation: Failing to keep the load "uphill" when traveling on ramps or grades."

Answer 1: Slight grades are not an issue such as crowns in roadways. Grades that can affect the stability are and should be of high concern as they may result in forklift overturning and death or serious injury to the operator. Please see the Forklift Hazard Evaluation Checklist- (This should be used for all forklift operations) Site form A-6002-924 and the example in DOE/RL-92-36 Chapter 6, page 7. You will see the item that identifies docks, grades and ramps >5%. If the manufacture has a lower limit it must be followed and would take precedence over our general rule.

If the grade > 5% or > than a % of grade established by the specific lift manufacture we must go vertically up and down the grade or put our operators at risk. The issue of grade needs to also take into consideration these additional items that can make the manufacturer established grades or grades of less than 5% dangerous:

- The type and class of forklift being used
- The surface condition-paved dirt ground
- The truck is loaded or unloaded- if loaded where is the center of gravity of the load
- How the truck is operated on the grade- such as turning.

6.2.3 Forklift Truck Operator The forklift truck operator has the following responsibilities:

6.2.3.a. Operate the truck in a safe responsible manner.

July 28, 2005 – Question 1: Is it allowable to partially lift/drag a container from the center of a trailer to the side of the trailer to allow further offloading?

Answer 1: It is an acceptable practice to partially lift and re-position a load so the lift can fully engage the load as long as the lift operator ensures the forklift does not become unstable or the integrity and stability of the load is not compromised. When the load is fully lifted to remove from the truck, it must be within the forklifts capacity at the given load center of the load.

17.3.7 Chapter 7.0 Shop Cranes

Interpretations: None

17.3.8 Chapter 8.0 Wire Rope

Interpretations:

8.3.3.3 Inspection Area: The inspection shall cover the entire length of each rope. Only the surface wires of the rope must be inspected. No attempt should be made to open the rope. Any deterioration resulting in loss of original strength shall be documented and a determination made as to whether further use of the rope would constitute a hazard. As a minimum, ropes shall be inspected for the following:

Items listed for frequent wire rope inspection.

Question: Does requirement to inspect the entire length of rope allow leaving the first layer of rope on the drum of mobile cranes as long as the qualified inspector can determine through visual inspection that there is no apparent condition that would require further removal or meet out of service criteria and end connections are acceptable and secure?

Answer: Yes

17.3.9 Chapter 9.0 Slings

Interpretations:

9.2.2.6 Chain Sling Inspection.

9.2.2.6.2. Periodic Inspection. Complete link-by-link inspections of the slings shall be performed at the intervals defined in Table 9-3. Any deficiencies shall be examined and a determination made as to whether they constitute a hazard. These inspections shall include chain sling frequent inspection, as specified above, in addition to the following.

Table 9-3. Frequent and Periodic Inspection of Chain Slings.

Service level	Sling service	Frequent inspection[a]	Periodic inspection[b]
Normal	Service that involves use of loads within the rated load	Monthly	Yearly
Severe	Service that involves normal service coupled with abnormal operating conditions	Daily to weekly	Monthly to quarterly
Special or infrequent	Service that involves operation, other than normal or severe, which is recommended by a qualified individual	Before and after each occurrence	Before each occurrence or sequence of occurrences within a 30-day period

9.2.3.8.2 Periodic Inspection. A wire rope sling periodic inspection shall be performed by a qualified inspector on a regular basis (at least annually).

1. Inspection frequency shall be based on the following criteria:
   a. Frequency of sling use
   b. Severity of service conditions
   c. Nature of lifts being made
   d. Experience gained on the service life of slings used in similar circumstances.

2. The periodic inspection shall be documented by any one of the following methods:
   a. Mark a serial number on the sling and maintaining inspection records by serial numbers.
   b. Institute a comprehensive marking program (such as color coding) to indicate when the next periodic inspection is required.
   c. Mark each sling with a tag that indicates when the next periodic inspection is required. This tag becomes the record.

9.2.5.6.3 Periodic Inspection. [Synthetic]A periodic inspection shall be performed by a qualified inspector on a regular basis with frequency of inspection based on the following criteria:

1. Frequency of sling use
2. Severity of service conditions
3. Nature of lifts being made
4. Experience gained on the service life of slings used in similar circumstances.

The periodic inspection shall be made at least annually and shall be documented by any one of the following methods:

February 21, 2007 - Question 1 - Is a periodic inspection required to be performed on a regular basis (at least annually) for slings <u>not being used</u> and left in locked up secured facilities, condemned facilities or facilities that are not routinely accessed do to environmental or radiological hazards?

<u>Answer to Question 1:- No</u>

February 21, 2007 - Question 2 - Would these slings be considered inaccessible for use, therefore not required to have a periodic inspection done until the slings are recovered, re-inspected and put back into service?

<u>Answer to Question 2:- Yes</u>

Subject: Design Factors, Chapter 9 Slings

April 15, 2008 <u>Question 1</u>: When using a combination of approved slings, manually operated chain hoist(s), and /or rigging hardware to attach a load to the crane, is it necessary to compensate for the difference in the design factor of individual components? For example, the rigging configuration for a specific lift consists of forged steel Weld less rings (design factor 6:1), shackles (design factor 5:1) and chain slings (design factor 4:1).

Answer 1: No. The design factor is the ratio between nominal or minimum breaking strength or yield strength and the rated capacity of the component. The rated load for each type of rigging is based on characteristic properties of the component material, service history established by organizations and manufacturers and therefore the design equation will vary by component. The design factors are adopted by ASME. The share of load and rigging configuration that may increase loading shall be determined to ensure rated Load or Working Load Limit (WLL) of the individual components are not exceeded.

17.3.10 Chapter 10.0 Rigging Hardware

Interpretations:

Subject: Design Factors, Chapter 10 Rigging Hardware

April 15, 2008 Question 1: When using a combination of approved slings, manually operated chain hoist(s), and /or rigging hardware to attach a load to the crane, is it necessary to compensate for the difference in the design factor of individual components? For example, the rigging configuration for a specific lift consists of forged steel Weld less rings (design factor 6:1), shackles (design factor 5:1) and chain slings (design factor 4:1).

Answer 1: No. The design factor is the ratio between nominal or minimum breaking strength or yield strength and the rated capacity of the component. The rated load for each type of rigging is based on characteristic properties of the component material, service history established by organizations and manufacturers and therefore the design equation will vary by component. The design factors are adopted by ASME. The share of load and rigging configuration that may increase loading shall be determined to ensure rated Load or Working Load Limit (WLL) of the individual components are not exceeded.

Subject: Concrete Inserts, Chapter 10 Rigging Hardware

There have been recurring questions regarding the applicable standards or requirements for concrete lifting inserts used with swivel hoist rings. There is no information regarding the inserts in either the Hanford Site H&R Manual, or the ASME B30.26 *Rigging Hardware* Standard.

October 15, 2009 Question 1: Do the manufacture specifications for the installation, use and design of concrete insert assembly apply and not the ASME B30.26 Rigging Hardware standard.

Answer 1: Yes, the manufactures specifications would apply for the installation, use and design of the inserts and not ASME B30.26, unless otherwise specified by the manufacture.. See examples below of inserts in question.

Meadow Burke hoist rings meet/exceed ASME B30.26 requirements. Meadow Burke concrete coil loop lifting inserts shown below are not designed to comply with this standard.

(2172) CX-4 COIL LOOP INSERT - FLARED

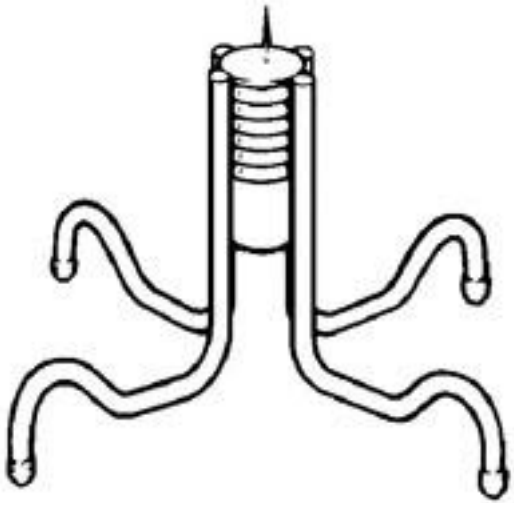
Safety Note: Minimum Coil penetration applies

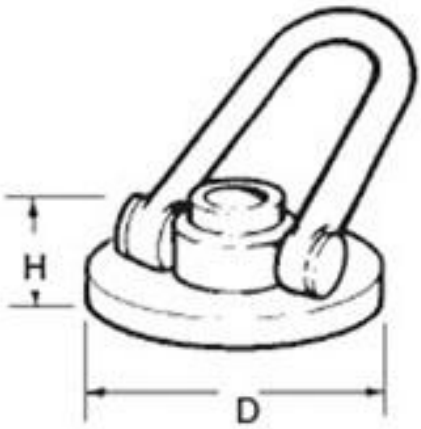
MB Item # Plain	MB Item # Galv- Specify Type	Description	Safe Work Load	Wire Diameter	Weight Per 100 (lbs)
430201	430214	3/4" x 6"	4,750	0.375	66
430269	430272	3/4" x 9"	4,750	0.375	80
430275	430278	3/4" x 9"	6,750	0.440	79
430285	430298	3/4" x 12"	4,750	0.375	111
430308	430311	1" x 9"	4,750	0.375	120
430312	430313	1" x 9"	8,000	0.440	179
430324	430337	1" x 12"	4,750	0.375	151
430338	430339	1" x 12"	8,000	0.440	178
430340	430341	1-1/4" x 12"	4,750	0.375	147
430342	430343	1-1/4" x 12"	8,000	0.440	185
430344	430345	1-1/2" x 12"	8,000	0.440	205

Safety factor is approximately 4:1.
Set-up charge for orders less than 100 pieces per size.
Set-up charge on E-Plated or HDG orders under 350 lbs.
*NOTE: For Finish - Specify "Plain", "Electro-Plated" (E.Plated), "Hot Dip Galvanized" (HDG)

To Order, Specify: quantity, name, type, bolt diameter and finish.

Dayton Superior hoist rings meet requirements of ASME B30.26. Dayton Superior concrete lifting inserts shown below are not designed to meet this ASME standard





Medium/Heavy Formwork

DAYTON SUPERIOR

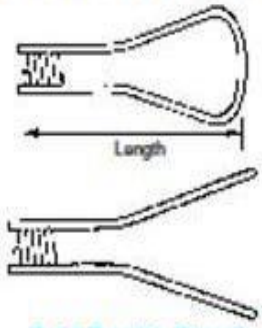
B-17 Double Flared Coil Loop Insert

Dayton Superior B-17 Double Flared Coil Loop Insert is made with two looped wire struts welded to a helix coil. The B-17 insert is suitable for heavy form anchorage in mass concrete construction. Standard length is 12" for 1", 1-1/4" and 1-1/2" diameter units. Standard 6" nominal flares are supplied unless special size or shaped flares are requested.

B-17 Double Flared Coil Loop Insert Selection Chart

Bolt Diameter x Insert Length	Flare width	Wire Strut Diameter	Safe Working Load Tension (lbs.)	Minimum Concrete Strength (psi)	Minimum Edge Distance
1" x 12" Std.	5-3/4"	.375"	18,000	1,000	15"
1" x 12" Hvy.	5-3/4"	.442"	27,000	1,000	15"
1-1/4" x 12" Std.	6"	.375"	18,000	1,000	15"
1-1/4" x 12" Hvy.	6"	.442"	27,000	1,000	15"
1-1/2" x 12" Std.	6-1/4"	.375"	18,000	1,000	15"
1-1/2" x 12" Hvy.	6-1/4"	.442"	27,000	1,000	15"

SWL provides a factor of safety of approximately 2 to 1.
SWL may vary with concrete weight and strength, as well as with insert setback and edge distance. Contact the Dayton Superior Technical Service Department for variables.



B-17 Double Flared Coil Loop Insert

To Order:
Specify: (1) quantity, (2) name, (3) size, (4) SWL.

Example:
500 pcs. B-17 Double Flared Coil Loop Inserts, 1-1/4" diameter, 27,000 lbs. SWL.

CONAC inserts shown below do not comply with the ASME B30.26 standard

17.3.11 Chapter 11.0 Below The Hook Lifting Devices

Interpretations:

11.3.1 Design Factor

Load-bearing structural components of a lifter shall be designed to withstand the stresses imposed by its rated load plus the weight of the lifter, with a minimum design factor of 3, based on the yield strength of the material, and with stress ranges that do not exceed the values given in ANSI/AWS D14.1, *Specification for Welding of Industrial and Mill Cranes and Other Material Handling Equipment* for the applicable conditions.

Date Unknown - Question 1: Is it the intent of this section to require fasteners performing as structural components of a lifter be designed so that the static stress resulting from the rated load and the weight of the lifter does not exceed 33% of the yield strength of the material?

Answer 1: Yes, The design factor of 3 is a relationship between the structural component (in this case the fasteners) material yield strength and the static stress imposed by the rated load and the weight of the lifter.

Date Unknown - Question 2: If the response to question (1) is yes, can fasteners be designed and pretension in accordance with applicable industry codes and standards without pretension stress becoming a factor in meeting the 33% of yield strength of the material criteria described in question (1)?

Answer 2: Yes, fastener pre-tension stress is not one of the stress factors in the design factor of 3 determination criteria.

September 21, 2004 - Question 1: Do the service classifications and PM/inspection frequency requirements provided in the Hanford Site Hoisting and Rigging Manual (based on ASME B30.20) apply to a "below-the-hook" lifting device when ANSI N14.6 has been imposed on that device by the responsible engineer/facility?

- Rigging Manual section 11.7 requires weekly to monthly frequent and semi-annual visual inspection for heavy service.
- ANSI N14.6 section 6.3 requires only annual load testing with visual inspections or alternatively allows special inspection, which includes NDE (Magnetic Particle).

Answer 1: The Hanford Site Hoisting and Rigging Manual section 11.2.1 Special Lifting Devices allows for the responsible engineer or design authority to invoke ANSI N14.6 for Design, Fabrication, Acceptance Testing, Maintenance, Assurance of continuing compliance, Inspection and Marking. The responsible engineer would determine the need to apply elements of ASME B30.20 such as the service classification but would not be required to when that element of ANSI N14.6 is applied such as inspection criteria.

April/1/2003 - Question 1: Are electrical switchgear (circuit breaker) lifting devices, designed, built and supplied by breaker manufacturer for handling his circuit breakers considered Below the Hook Lifting devices as defined in DOE/RL-92-36 Section 11 and ASME B30.20?

Answer 1: No. These circuit breaker lifting devices designed, built and supplied specifically for lifting the manufactures breakers are considered "Proprietary Lifting Devices" and do not meet criteria of lifting devices for freely suspended loads as defined in DOE/RL-92-36 Section 11 and ASME B30.20?

June 21, 2006 – Question 1: Is a hook such as referenced in Chapter 11.0, Attachment 11.1-5; when attached directly to the load block hook of a crane or hoist considered a Below-the–Hook Lifting Device?

Answer 1: Yes. The hook shaped device shown is classified as a Below-the-Hook Lifting Device and as such must comply with the requirements of ASME B30.20 Below-the-Hook Lifting Devices as required by Chapter 11, Section 11.7.1.

Question 2: If a hook, covered in Chapter 10 Rigging Hooks or Chapter 5 Hooks was attached directly to a load block hook would it then become a Below-the-Hook Lifting Device?

Answer 2: No. The hooks covered in Chapter 10, Riggings Hooks and Chapter 5 Hooks, of the Hanford Site Hoisting and Rigging Manual are designed and built to the requirements of ASME B30.10 Hooks and not to ASME B30.20 Below the Hook Lifting Devices. The determination of which standard is applicable is based on to which standard the device is built, and not to its use or application in a rigging system.

Subject: Design Factors, Chapter 11 Below The Hook Lifting Devices

April 15, 2008 Question 1: When using a combination of approved slings, manually operated chain hoist(s), and /or rigging hardware to attach a load to the crane, is it necessary to compensate for the difference in the design factor of individual components? For example, the rigging configuration for a specific lift consists of forged steel Weld less rings (design factor 6:1), shackles (design factor 5:1) and chain slings (design factor 4:1).

Answer 1: No. The design factor is the ratio between nominal or minimum breaking strength or yield strength and the rated capacity of the component. The rated load for each type of rigging is based on characteristic properties of the component material, service history established by organizations and manufacturers and therefore the design equation will vary by component. The design factors are adopted by ASME. The share of load and rigging configuration that may increase loading shall be determined to ensure rated Load or Working Load Limit (WLL) of the individual components are not exceeded.

17.3.12 Chapter 12.0 Hoists, Jib Cranes, and Monorail Systems

Interpretations:

Subject: Design Factors, Chapter 12 Hoists, Jib Cranes, and Monorail Systems

April 15, 2008 Question 1: When using a combination of approved slings, manually operated chain hoist(s), and /or rigging hardware to attach a load to the crane, is it necessary to compensate for the difference in the design factor of individual components? For example, the rigging configuration for a specific lift consists of forged steel Weld less rings (design factor 6:1), shackles (design factor 5:1) and chain slings (design factor 4:1).

Answer 1: No. The design factor is the ratio between nominal or minimum breaking strength or yield strength and the rated capacity of the component. The rated load for each type of rigging is based on characteristic properties of the component material, service history established by organizations and manufacturers and therefore the design equation will vary by component. The design factors are adopted by ASME. The share of load and rigging configuration that may increase loading shall be determined to ensure rated Load or Working Load Limit (WLL) of the individual components are not exceeded.

17.3.13 Chapter 13.0 Overhead and Gantry Cranes

Interpretations:

July 15, 2004 - Question 1: Can the frequent and daily inspection listed in Hanford Site Hoisting and Rigging Manual section 13.9.1.3.and section 13.9.1.2.2, be consolidated into a one (daily) inspection to take credit for the frequent and daily inspection. We could just call the first day of the month the frequent inspection. I have been told that some facilities do it that way. Is the Hanford Site Hoisting and Rigging Manual requirement such that we would have to write a new OP to perform the frequent inspection for the month?

Answer 1: As long as you cover those requirements for daily and frequent listed in the Hanford Site Hoisting and Rigging Manual (there are some differences and you must ensure they are all completed) you could consolidate to one procedure and take credit for it.

July 15, 2004 - Question 2: What qualifications are required to perform frequent and daily inspection listed in Hanford Site Hoisting and Rigging Manual Section 13.9.1.3.and Section 13.9.1.2.2?

Answer 2: The Hanford Site Hoisting and Rigging Manual does not require a "qualified inspector" to perform Frequent and Daily visual and operation checks of the crane. A qualified operator may perform these. They are observations for visual damage or malfunctions.

13.8 MODIFICATIONS

Cranes may be modified or re-rated provided such modifications and the supporting structure are analyzed thoroughly by a qualified person or crane manufacturer. A re-rated crane or one whose load-supporting components have been modified shall be subjected to a rated load test (see paragraph 13.9.3.4, "Rated Load Test"). The new rated load shall be displayed in accordance with paragraph 13.7.1, "Rated Load Marking." Documentation supporting crane re-rating shall be contained in, or retrievable by reference from, the crane maintenance file.

February 09, 2005 - Question 1: Is the following sentence from Section 13.8: "A re-rated crane or one whose load-supporting components have been modified shall be subjected to a rated load test (see paragraph 13.9.3.4, "Rated Load Test")*."* applicable to **up-rating cranes only** and not the down-rating of cranes?

Answer 1: If the re-rating is for other than administrative proposes and we have re-rated because of some physical condition of the crane components or supporting structure then we must load test. The new rating needs to be supported by engineering analysis.

17.3.14 Chapter 14.0 Mobile Cranes

Interpretations:

14.4.7.5 Power Lines Energized, Crane Operating Within the Erected/Fully Extended Boom Length of the Prohibited Zone (Crane has the capacity to boom down, swing or extend into the prohibited zone**.** See Figure 14-2).

a. An onsite meeting (see 14.4.7.3) between project management and a qualified representative of the owner of the power lines or a designated representative of the electrical utility shall take place to establish the conditions to safely complete the operations

April 29, 2005 - Question 1: Does project management mean somebody from the rigging crew preferably the designated leader, or does it mean anyone within management over a particular construction activity?

Answer 1: The intent is that the supervisor or person responsible for the crane crew and is involved in the crane activity be at that meeting, it could be a DL. This is the person who is responsible for the crane crew and activities, understands crane configurations, capabilities and is responsible for implementing those items listed in 14.4.7.5.b-j and 14.4.7.6 a-g. Facility or Organization where the activity is taking place wishes to have a representative at the meeting that would be good.

14.4.7.6 Crane Operations Within the Prohibited Zone and the Power Lines are Energized.

CAUTION: Working in the prohibited zone with power lines energized requires very disciplined and extraordinary safety precautions, including direct involvement and support from the electric utility organization. Working in the prohibited zone with power lines energized, shall only be performed when no alternative exists.

14.4.7.6.a. Before such operations take place, a qualified person responsible for crane operations and a qualified representative of the utility or an engineer qualified in power line transmission, after visiting the site together, shall determine whether operating the crane within the Prohibited Zone is the most feasible way to complete the job. Both persons shall set minimum required clearances and procedures for safe operations. These operations shall be under their supervision.

April 29, 2005 - Question 2: Does the definition 14.4.7.6 a., "a qualified person responsible for crane operations" mean a designated leader, crane operator, rigger, or the crane supervisor, or does it mean anyone within management over a particular construction activity?

Answer 2: See Answer 1 to Question 1 concerning 14.4.7.5.

14.4.7.4Crane Operation Near De-energized and Grounded Electric Power Lines.

14.4.7.4.b. The lines shall be visibly grounded to avoid electrical feedback and appropriately marked at the job-site location.

June 21, 2006 - Question 1--Is it the intent of 14.4.7.4.b that only transmission & distribution lines be grounded to avoid electrical feedback or to become re-energized from other sources and not insulated overhead premises wiring installed in accordance with the National Electrical code (NEC).

Answer 1: Yes, as long as the premises line voltage does not exceed 480 volt, factory-installed insulation is on the conductor and the insulation would not be damaged while doing the work.

June 21, 2006 - Question 2--If an electrically safe work condition has been established, i.e., the circuit has been locked out in accordance with 29 CFR 1910.147, including authorized worker locks belonging to the crane operator and assisting workers, will that satisfy the intent of 14.4.7.4.b for insulted premised wiring lines?

Answer 2: No, The requirements 29CFR 1910.147 are required regardless of grounding issues.

14.3 CONDUCT OF OPERATIONS

14.3.e Before leaving the crane unattended, perform the following tasks:

(1) Land any load, bucket, lifting magnet, or other device

June 21, 2006 - Question 1: When and under what conditions is it acceptable for a mobile crane operator to leave his/her position at the crane controls with a load suspended?

Answer 1: If a condition arises that puts the mobile crane operator's life or health at risk by remaining in the cab with (or without) a load suspended, he/she shall leave the crane cab. It is also important that anytime there is a known possibility that a condition could arise during the course of a work assignment requiring the operator to leave a crane with the load suspended, it must be addressed with the assigned designated leader and the crane operator prior to commencement of the work, as a part of pre-job planning.

If there is no threat to the life or health of the crane operator, then the operator should not leave a crane with the load suspended. Leaving a load suspended from an unattended mobile crane is a hazardous practice and should never be implemented for convenience. To leave a mobile crane unattended with a suspended load, other than in a situation where the operator's life or health is threatened, there must be an analysis completed by qualified hoisting and rigging personnel to identify manufacturer-specific recommendations as well as implement actions and methods to mitigate the hazards. The analysis shall be based on, as a minimum, the operating characteristics and limitations of the specific crane and the following elements that may affect load, crane stability and cranes structural integrity;

- Crane footing
- Load weight,
- Load radius
- Physical dimensions and shape of the load

- Criticality of the load and it's surroundings per chapter 3 of the DOE/RL-92-36 Hoisting and Rigging Manual
- Crane capacity
- Crane condition
- Current and predicted weather conditions
- Effects on rigging, rigging hardware and lifting devices, if used
- Load stability
- Estimated time crane with suspended load will be left unattended

In most cases the safest and most expedient method is to leave the operator at the controls until the load can be landed. If after analysis it is determined that the load will be left suspended without the operator in the cab then the applicable requirements of DOE/RL-92-36, Hanford Site Hoisting and Rigging Manual sections 14.3 and 14.4, and mitigating actions identified from the analysis shall be applied. As a minimum control, the affected area shall be cordoned off to prevent personnel access into the work zone.

14.4.4 Holding the Load

14.4.4.c. No person should be permitted to stand or pass under a suspended load.

July 6, 2006 - Question 1: Can a person walk, work, or park a vehicle under a crane that is boomed up with the block and or ball hanging with no load attached?

Answer 1: Yes. The key term here is suspended load as used in DOE/RL-92-36 Hanford Site Hoisting and Rigging Manual section14.4.4.c "Holding the Load". The "load" referenced in Chapter 22.0 Appendix A and 14.4.2 is not referring to suspended load but is the term used in calculating crane capacities and induced loads. The boom, load block and other components of a crane referenced are not considered suspended load. The "suspended load" as it applies to personnel standing or passing under, is the item being lifted. If it were applied to the boom and load block or hook it would not only be impractical but in most cases impossible to perform work such as attaching the load and maintenance of the equipment.

17.3.15 Chapter 15.0 Personnel Lifting

Interpretations: None

17.3.16 Chapter 16.0 A-Frames and Trolleys

Interpretations: None

17.3.17 Chapter 17.0 Interpretations

Interpretations: See contents of this chapter.

17.3.18 Chapter 18.0 Hoisting & Rigging in Hostile Environments

Interpretations: None

17.3.19 Chapter on Hold

Interpretations: None

17.3.20 H&R Committee Charter

Interpretations: None

17.3.21 References and Bibliography

Interpretations: None

17.3.22. Appendix A

monthly. Once each calendar month. A maintenance/inspection program should accomplish monthly tasks at approximately the same time each calendar month. To manage such programs, tasks should be scheduled as "due" on a particular date. If a task cannot reasonably be performed on the scheduled "due" date, it should promptly be rescheduled for a date during the same calendar month.

January 21, 2004 - Question 1: Does "monthly" and "annually" when applied to documented inspections of equipment covered by the Hanford Hoisting and Rigging Manual, such as wire rope and cranes, mean if these inspection are not performed 30 days or 365 days respectively from the previous inspection, the equipment is out of service?

Answer 1: Required monthly and annual inspections need to be performed once each calendar month and once each calendar year to as close to the exact date (30 or 365 days from previous date) as possible allowing for variances for weekends and work schedules. As long as the inspection is performed in the month it was due the equipment is not out of service. Monthly inspections could, on occasion be performed early in one month and late in the next, but if this were a common practice it would not be meeting the intent of the law or requirement.

Question 2: Is there a "grace period"?

Answer 2: There is no grace period.

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